

*Please provide the following information, and submit to the NOAA DM Plan Repository.*

**Reference to Master DM Plan (if applicable)**

*As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.*

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

**1. General Description of Data to be Managed****1.1. Name of the Data, data collection Project, or data-producing Program:**

A Dataset of Aerial Survey Counts of Harbor Seals in Iliamna Lake, Alaska: 1984-2013

**1.2. Summary description of the data:**

This dataset provides counts of harbor seals from aerial surveys over Iliamna Lake, Alaska, USA. The data have been collated from three previously published sources ( Mathisen and Kline 1992; Small 2001; ABR Inc. Environmental Research and Services 2011) and newly available data from the NOAA Alaska Fisheries Science Center and the Newhalen Tribal Council. The survey years range between 1984 and 2013. Counts are reported as summed totals across all identified waypoints in the lake for each survey date.

The NOAA National Marine Mammal Laboratory (NMML) (Alaska Fisheries Science Center, Seattle, Washington, USA) conducted aerial surveys of Iliamna Lake between 2008 and 2013. Surveys were conducted as part of annual harbor seal survey effort and in collaboration with local community participants and researchers at the University of Alaska. Surveys were flown using high wing, twin engine aircraft (Aero Commander 680, 690 or a de Havilland Twin Otter). Survey altitude was generally 330 m and at an aircraft speed of 120 kts. Surveys were performed seasonally for most years between 2008 and 2013. Surveys were timed so that one survey was conducted while the lake was mostly frozen (Late March/early April), one during pupping (mid July), and often several during the August molt, when the greatest number of seals typically haul out on shore. Surveys were flown, weather allowing, in the mid- to late-afternoon, when the number of seals hauled out was expected to be highest. Aircraft flight track was recorded by GPS and all seals sighted were digitally photographed using a high resolution digital SLR camera with a telephoto zoom lens (up to 400mm). Time, date, latitude, longitude, and altitude were automatically saved into the image metadata or georeferenced post survey using the GPS track and software.

The total number of seals hauled out were counted from the digital photographs and recorded for each identified site. Pups were determined by their smaller size, and close proximity (less than 1 body length; either nursing or laying right next) to a larger seal. Pups were no longer recorded beyond about mid-August when many have been weaned

and cannot reliably be distinguished from other non-adult seals. In 2009, a collaborative effort between NMML and researchers from the Newhalen Tribal Council (Newhalen Tribal Council 2009) provided 10 additional surveys and similar techniques were used. The raw survey count data from these surveys was provided to NMML. Aerial surveys were authorized under a Marine Mammal Protection Act General Authorization (LOC No. 14590) issued to the NMML.

Between 2005 and 2007, ABR, Inc. Environmental Research and Services conducted a series of aerial surveys for harbor seals in Iliamna Lake (ABR Inc. Environmental Research and Services 2011). In addition, earlier counts from surveys conducted by ADFG (Small 2001) and a 1991 census by Mathisen and Kline (Mathisen and Kline 1992) were incorporated into the dataset to expand the historical reach. Geographic coordinates were provided (or, when not provided, determined based on descriptions or physical maps) for each survey site and these sites were compared and merged with locations identified by NMML. In some cases, sites in very close geographic proximity were combined into a single site.

**1.3. Is this a one-time data collection, or an ongoing series of measurements?**

One-time data collection

**1.4. Actual or planned temporal coverage of the data:**

1984-08-06 to 2013-08-07

**1.5. Actual or planned geographic coverage of the data:**

W: -154.94, E: -154.214, N: 59.7512, S: 59.5281

**1.6. Type(s) of data:**

*(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)*  
Table (digital)

**1.7. Data collection method(s):**

*(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)*

Instrument: N/A

Platform: Airplane

Physical Collection / Fishing Gear: N/A

**1.8. If data are from a NOAA Observing System of Record, indicate name of system:**

**1.8.1. If data are from another observing system, please specify:**

**2. Point of Contact for this Data Management Plan (author or maintainer)**

**2.1. Name:**

Josh London

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:**

Alaska Fisheries Science Center

**2.4. E-mail address:**

josh.london@noaa.gov

**2.5. Phone number:**

206-526-4296

**3. Responsible Party for Data Management**

*Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.*

**3.1. Name:**

Dave Withrow

**3.2. Title:**

Data Steward

**4. Resources**

*Programs must identify resources within their own budget for managing the data they produce.*

**4.1. Have resources for management of these data been identified?**

Yes

**4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):**

Unknown

**5. Data Lineage and Quality**

*NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.*

**5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible**

*(describe or provide URL of description):*

Lineage Statement:

Between 2005 and 2007, ABR, Inc. Environmental Research and Services conducted a series of aerial surveys for harbor seals in Iliamna Lake (ABR Inc. Environmental Research and Services 2011). In addition, earlier counts from surveys conducted by ADFG (Small 2001) and a 1991 census by Mathisen and Kline (Mathisen and Kline 1992) were incorporated into the dataset to expand the historical reach. Geographic coordinates were provided (or, when not provided, determined based on descriptions or physical maps) for each survey site and these sites were compared and merged with locations identified by NMML. In some cases, sites in very close geographic proximity

were combined into a single site.

**5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:**

**5.2. Quality control procedures employed (describe or provide URL of description):**

This dataset represents a collection of various sources, time periods, research objectives and techniques. Please refer to the original data sources for quality control procedures specific to the original data collection and analysis. Reasonable efforts were made to insure consistency and accuracy in creating the combined dataset presented here. This included but was not limited to verification of date-time values, positional coordinates and reported counts.

## **6. Data Documentation**

*The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.*

**6.1. Does metadata comply with EDMC Data Documentation directive?**

Yes

**6.1.1. If metadata are non-existent or non-compliant, please explain:**

**6.2. Name of organization or facility providing metadata hosting:**

NMFS Office of Science and Technology

**6.2.1. If service is needed for metadata hosting, please indicate:**

**6.3. URL of metadata folder or data catalog, if known:**

<https://inport.nmfs.noaa.gov/inport/item/24457>

**6.4. Process for producing and maintaining metadata**

*(describe or provide URL of description):*

Metadata produced and maintained in accordance with the NMFS Data Documentation Procedural Directive: <https://inport.nmfs.noaa.gov/inport/downloads/data-documentation-procedural-directive.pdf>

## **7. Data Access**

*NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides*

*information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.*

**7.1. Do these data comply with the Data Access directive?**

Yes

**7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?**

**7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:**

**7.2. Name of organization of facility providing data access:**

National Centers for Environmental Information - Silver Spring, Maryland

**7.2.1. If data hosting service is needed, please indicate:**

not needed

**7.2.2. URL of data access service, if known:**

<http://dx.doi.org/10.7289/V5H41PCQ>

**7.3. Data access methods or services offered:**

Data as described can be accessed via the National Center for Environmental Information (doi:10.7289/V5H41PCQ)

**7.4. Approximate delay between data collection and dissemination:**

unknown

**7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:**

N/A

**8. Data Preservation and Protection**

*The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.*

**8.1. Actual or planned long-term data archive location:**

*(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)*

NCEI-MD

**8.1.1. If World Data Center or Other, specify:**

**8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:**

**8.2. Data storage facility prior to being sent to an archive facility (if any):**

Alaska Fisheries Science Center - Seattle, WA

**8.3. Approximate delay between data collection and submission to an archive facility:**  
unknown

**8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?**

*Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection*

IT Security and Contingency Plan for the system establishes procedures and applies to the functions, operations, and resources necessary to recover and restore data as hosted in the Western Regional Support Center in Seattle, Washington, following a disruption.

**9. Additional Line Office or Staff Office Questions**

*Line and Staff Offices may extend this template by inserting additional questions in this section.*